

[Claims]

1. Endoscope comprising a flexible catheter probe having a plurality of lumens, a grip provided at the proximal end of the probe, an optical system provided in at least one optical lumen of the catheter probe, at least one working lumen for a surgical instrument, and a control element attached at or near the distal end of the probe for bending the end of the probe and displacably guided in axial direction on the probe,
characterized in that a torsion-resistant guide device (12) inside which the control element (13) is guided at the proximal end of the catheter probe (1) is to be connected non-rotatingly to the grip (3) by means of a releasable lock (2) and the control element (13) is to be connected by means of a releasable fastener (21) to a slider (14) guided inside the grip (1), that the distal end of the optical lumen (4) has a transparent seal (5), and that the optical system (6) is displaceably disposed inside the optical lumen (4) and can be removed from the optical lumen (4).
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2. Endoscope according to claim 1,
characterized in that the surgical instrument is removable from at least one working lumen (7).
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3. Endoscope according to claim 1 or 2,
characterized in that the catheter probe (1) is configured as a disposable part.
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4. Endoscope according to one of claims 1 to 3,
characterized in that the catheter probe (1) is configured as an injection-molded part or extruded part.
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5. Endoscope according to one of claims 1 to 4,
characterized in that a torsion-resistant probe attachment member (8) is provided at the proximal end of the catheter probe (1), said member having a plurality of lumen outlets (9, 10, 11) for the probe lumens (4, 7, 27), and the guide device (12) for the control element (13).
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6. Endoscope according to one of claims 1 to 5,
characterized in that the slider (14) can be moved against a biasing force (29) by means of an operating element guided on the grip housing.
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7. Endoscope according to one of claims 1 to 6,
characterized in that the slider (14) is displacably mounted on the grip housing by means of a device for converting a rotational movement into a linear axial movement, in particular a crank assembly (15).
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8. Endoscope according to one of claims 1 to 7,

- characterized in that the slider (14) can be locked in different positions on the grip housing by means of a locking device (16).
9. Endoscope according to one of claims 1 to 8,
characterized in that the housing of the grip (3) and operating elements (17, 18) disposed on the grip for actuating the slider movement and for locking the slider movement relative to a center plane (42) running through the grip (42) are symmetrically configured.
- 5 10. Endoscope according to one of claims 1 to 9,
characterized in that an eyepiece holder (19) is disposed at the proximal end of the grip housing in a joint (20), in particular a ball-and-socket joint.
- 10 11. Endoscope according to claims 9 and 10,
characterized in that the center (43) of the ball-and-socket joint is in the center plane (42).
- 15 12. Endoscope according to one of claims 1 to 11,
characterized in that the rotational axis (34) of the crank assembly (15) runs perpendicularly to the center plane (42).
- 20 13. Endoscope according to one of claims 1 to 12,
characterized in that the crank assembly (15) is mounted rotatably about the rotational axis (24) in a hollow cylindrical bearing (35) forming part of the grip housing.
14. Endoscope according to one of claims 1 to 13,
characterized in that the lumen outlets (9, 10, 11) for the plurality of probe lumens (4, 7, 27) can be connected to associated terminal equipment independently of the grip (3) and external to the grip (3).
- 25 15. Endoscope according to one of the preceding claims, combined with a device for mechanical lithotripsy and an outer sleeve tube (46) which can be slid over the catheter probe (1).
16. Endoscope according to claim 1, in which the outer sleeve (46) is longer than the length of the catheter probe to be inserted into the patient's body.